Attorney docket # DP-308959

IN THE CLAIMS:

1. (Currently Amended) A method of kinetic spray coating a substrate (116) covered by a plastic-type material (112, 114) comprising the steps of:

a) providing particles of a material to be sprayed having an average nominal diameter of from 60 to 250 microns;

b) providing a supersonic nozzle (54) having a converging region (56) connected to a diverging region through a throat (58);

c) providing a substrate material (116) covered by a plastic-type material (112, 114) and positioned opposite the nozzle (54);

d) providing a mask (118, 122) having at least one opening (120) therein, pressing the mask (118, 122) against the plastic-type material (112, 114);

e) directing a flow of a heated main gas through the nozzle (54); and

f) kinetic spraying the particles by entraining the particles in the flow of the heated main gas and accelerating the particles to a velocity sufficient to result in the particles passing through the opening (120) in the mask (118,122) and removing the plastic-type material (112) and then adhering to the substrate material (116) upon impact~~, wherein one of the substrate material (116) and the nozzle (54) are moved relative to the other of the substrate material (116) and the nozzle (54) at a traverse speed of from 70 to 260 millimeters per second~~.

2. (Original) The method as recited in claim 1, wherein the particles comprise either tin, tin alloys, aluminum, aluminum alloys, silver, silver alloys, gold, gold alloys, lead, lead alloys, zinc, zinc alloys, or a mixture thereof.

3. (Original) The method as recited in claim 1, wherein the substrate material (116) comprises at least one electrical conductor material.

4. (Original) The method as recited in claim 1, wherein the substrate material (116) comprises a flexible electrical circuit.

5. (Original) The method as recited in claim 1, wherein step c) comprises positioning the substrate material (116) at a distance of from 1.2 to 10 centimeters from an exit end (60) of the nozzle (54).

6. (Original) The method as recited in claim 1, wherein step d) comprises providing a mask comprising an upper mask (118) and a lower mask (122) and sandwiching the substrate material (116) between the upper (118) and lower (122) masks.

7. (Original) The method as recited in claim 1, wherein step d) comprises providing a mask (118, 122) formed from steel, stainless steel, ceramic, a metal, or a mixture thereof.

8. (Original) The method as recited in claim 1, wherein step f) comprises entraining the particles in the flow of the gas at a point in the diverging region.

9. (Original) The method as recited in claim 1, wherein step f) comprises accelerating the particles to a velocity of from 100 to 1200 meters per second.

10. (Cancelled)

11. (Original) The method as recited in claim 1, wherein step e) comprises providing a heated main gas having a temperature of from about 315 to 710 degrees Celsius.

12. (Currently Amended) A method of kinetic spray coating a substrate (86, 92) covered by a plastic-type material (82, 84, 90) comprising the steps of:

a) providing particles of a material to be sprayed having an average nominal diameter of from 250 to 1400 microns;

b) providing a supersonic nozzle (54) having a converging region (56) connected to a diverging region through a throat (58);

c) providing a substrate material (86, 92) covered by a plastic-type material (82, 84, 90) and positioned opposite the nozzle (54);

d) directing a flow of a heated main gas through the nozzle (54); and

e) kinetic spraying the particles by entraining the particles in the flow of the heated main gas and accelerating the particles to a velocity sufficient to result in the particles passing through the plastic-type material (82, 84, 90) and adhering to the substrate material (86, 92) upon impact~~, wherein one of the substrate material (86, 92) and the nozzle (54) are moved relative to the other of the substrate material (86, 92) and the nozzle (54) at a traverse speed of from 70 to 260 millimeters per second~~.

13. (Original) The method as recited in claim 12, wherein the particles comprise either tin, tin alloys, aluminum, aluminum alloys, silver, silver alloys, gold, gold alloys, lead, lead alloys, zinc, zinc alloys, or a mixture thereof.

14. (Original) The method as recited in claim 12, wherein the substrate material (86, 92) comprises at least one electrical conductor material.

15. (Original) The method as recited in claim 12, wherein the substrate material (86, 92) comprises a flexible electrical circuit.

16. (Original) The method as recited in claim 12, wherein step c) comprises positioning the substrate material (86, 92) at a distance of from 3.5 to 15 centimeters from an exit end (60) of the nozzle (54).

17. (Original) The method as recited in claim 12, wherein step e) comprises entraining the particles in the flow of the gas at a point in the diverging region.

18. (Original) The method as recited in claim 12, wherein step e) comprises accelerating the particles to a velocity of from 100 to 1200 meters per second.

19. (Cancelled)

20. (Original) The method as recited in claim 12, wherein step d) comprises providing a heated main gas having a temperature of from about 315 to 710 degrees Celsius.

21. (Original) The method as recited in claim 12, further comprising providing a mask (118, 122) having at least one opening (120) therein and positioned between the nozzle (54) and the substrate material (86, 92) and directing the particles through the opening (120).

22. (Original) The method as recited in claim 21, wherein the mask (118, 122) is formed from steel, stainless steel, ceramic, a metal, or a mixture thereof.

Please add the following claims.

23. (New) The method as recited in claim 1, wherein the substrate material (116) and the nozzle (54) are moved relative to each other at a traverse speed of from 70 to 260 millimeters per second.

24. (New) The method as recited in claim 12, wherein the substrate material (86, 92) and the nozzle (54) are moved relative to each other at a traverse speed of from 70 to 260 millimeters per second.

25. (New) The method as recited in claim 24, wherein step e) comprises kinetic spraying the particles in a single pass.

26. (New) The method as recited in claim 12, wherein step e) comprises kinetic spraying the particles in a single pass.

27. (New) The method as recited in claim 12, wherein the particles have an average nominal diameter of from 600 to 1400 microns.